

REMARKS

Claims 1-13 are all the claims pending in the application.

I. Objections to the Specification

The Examiner has objected to the title of the invention and the Abstract for the reasons set forth on page 2 of the Office Action. In particular, the Examiner has indicated that the title of the invention is not descriptive, and that the Abstract does not include periods at the end of the sentences.

By this amendment, Applicant notes that both the title of the invention and the Abstract have been amended so as to address the above-noted objections. It is noted that minor editorial changes have also been made to the specification and Abstract for grammatical and general readability purposes. No new matter has been added.

Based on the foregoing, Applicant respectfully requests that the Examiner reconsider and withdraw the objections to the specification.

II. Claim Rejections under 35 U.S.C. § 102

Claim 2 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Yamamoto et al. (Adaptive internally turbo-coded ultra wideband-impulse radio (AITC-UWB-IR)). It is kindly requested that the Examiner reconsider this rejection for the following reasons.

Claim 2 recites the features of receiving a transmit signal as n-piece received pulse trains, the transmit signal being n-piece repetitive pulse trains transmitted after a k-bit information bit train is encoded to an n-bit encoded bit train at a coded rate of (k/n) , and subsequently the n-bit encoded bit train is transformed to the n-piece repetitive pulse trains; and

outputting number of repetitive pulses composing each of the n-piece received pulse trains, based on pulse train information or bit train information received beforehand.

Applicant respectfully submits that Yamamoto does not disclose or suggest the above-noted combination of features recited in claim 2.

In particular, with respect to Yamamoto, Applicant notes that this reference discloses an AITC-UWB-IR system which transmits N_s/n pulses for each encoded bit, whereby the system chooses the code rate of the Turbo code, the number of repetition block code, and the number of iterations in the Turbo decoder adaptively to achieve a lower BER (see page 3537). Yamamoto, however, neither discloses nor suggests that variation of repetition factors for encoded bits can be effected on encoded bits derived from the same set of information bits (k).

As such, Applicant respectfully submits that while Yamamoto discloses a system which transmits N_s/n pulses for each encoded bit, that Yamamoto does not disclose or suggest the above-noted combination of features set forth in claim 2 of receiving a transmit signal as n-piece received pulse trains, the transmit signal being n-piece repetitive pulse trains transmitted after a k-bit information bit train is encoded to an n-bit encoded bit train at a coded rate of (k/n), and subsequently the n-bit encoded bit train is transformed to the n-piece repetitive pulse trains; and outputting number of repetitive pulses composing each of the n-piece received pulse trains, based on pulse train information or bit train information received beforehand.

In view of the foregoing, Applicant respectfully submits that claim 2 is patentable over Yamamoto, an indication of which is kindly requested.

III. Claim Rejections under 35 U.S.C. § 103(a)

A. Claims 1, 3-7 and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al. (Adaptive internally turbo-coded ultra wideband-impulse radio (AITC-UWB-IR)) in view of Fischer (US 2008/0285663).

Regarding the above-noted rejection, Applicant notes that the Fischer reference (US 2008/0285663) does not qualify as prior art against the present application. In particular, Applicant points the Examiner's attention to MPEP § 706.02(f)(1)(III), which depicts a flowchart for determining a 35 U.S.C. § 102(e) date for a U.S. patent application publication that is based on an International Application.

In this regard, Applicant notes that the U.S. application (i.e., Application No. 10/574,7230) corresponding to the Fischer reference was the National Stage of International Application No. PCT/EP2004/011482, which was filed on October 7, 2004, and which published as WO 2005/036768 on April 21, 2005. Regarding the above-noted WIPO publication (i.e., WO 2005/036768), Applicant notes that this publication was not in the English language.

Taking the above-noted facts into consideration, and turning to the flowchart shown in MPEP § 706.02(f)(1)(III), Applicant notes that because (1) the above-noted International application was filed after November 29, 2000, and (2) the WIPO publication was not in English, the Fischer reference (i.e., US 2008/0285663) does not have a § 102(e) date. Instead, as explained in the flowchart shown in MPEP § 706.02(f)(1)(III), this reference is prior art only as of its publication date (i.e., November 20, 2008).

In this regard, Applicant notes that because the filing date of the present application is August 30, 2005 (i.e., the International filing date of corresponding International Application No. PCT/JP05/16204), which is prior to the November 20, 2008 publication date of Fischer (US

2008/0285663), that the Fischer reference does not qualify as prior art against the present application.

Further, as noted above, the WIPO publication corresponding to the Fischer reference published as WO 2005/03676803 on April 21, 2005, which is prior to the filing date of the present application. Applicant notes, however, that the priority date of the present application is September 2, 2004, and that a verified English translation of the priority document (JP 2004-255289) is being submitted herewith, thereby perfecting the foreign priority date of September 2, 2004. Accordingly, the WIPO publication corresponding to the Fischer reference also does not qualify as prior art against the present application.

In view of the foregoing, Applicant respectfully submits that because the Fischer reference applied in the rejection of claims 1, 3-7 and 11 does not qualify as prior art against the present application, that the above-noted rejection of claims 1, 3-7 and 11 must be withdrawn.

B. Claims 8-10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al. (Adaptive internally turbo-coded ultra wideband-impulse radio (AIRC-UWB-IR) in view of Fischer (US 2008/0285663), and further in view of Eidson (US 2004/0047284).

Regarding the above-noted rejection, for the same reasons as discussed above in connection with the rejection of claims 1, 3-7 and 11, Applicant notes that the Fischer reference does not qualify as prior art against the present application. Accordingly, Applicant respectfully submits that the above-noted rejection of claims 8-10 must be withdrawn.

C. Claims 12 and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al. (Adaptive internally turbo-coded ultra wideband-impulse radio (AIRC-

UWB-IR)) in view of Fischer (US 2008/0285663), and further in view of Eidson (US 2004/0047284).

Regarding the above-noted rejection, for the same reasons as discussed above in connection with the rejection of claims 1, 3-7 and 11, Applicant notes that the Fischer reference does not qualify as prior art against the present application. Accordingly, Applicant respectfully submits that the above-noted rejection of claims 12 and 13 must be withdrawn.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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